

December 27, 1996

MEMORANDUM

TO: Orville D. Green, Assistant Administrator
Air & Hazardous Waste

FROM: Martin Bauer, Chief *M. Bauer*
Air Quality Permitting Bureau

SUBJECT: Issuance of Tier II Operating Permit #027-00060 to
Woodgrain Millwork, Incorporated, Nampa, Idaho

PURPOSE

The purpose of this memorandum is to satisfy the requirements of IDAPA 16.01.01 Sections 400 through 406 (Rules for the Control of Air Pollution in Idaho) (Rules) for issuing Operating Permits.

PROJECT DESCRIPTION

This project is for the issuance of a Tier II Operating Permit (OP) for the Woodgrain Millwork, Inc., facility located at Nampa, Idaho. The permit is being issued in order to establish the facility as a synthetic minor source. The emission point sources are seven (7) cyclones, two (2) baghouses, three (3) dryers, and twelve (12) space heaters. Fugitive sources include wood treating, gluing, and synthetic patching operations; and haul roads, loadout operations, and target boxes.

SUMMARY OF EVENTS

On December 29, 1995, DEQ received a Tier II OP application from Woodgrain Millwork, Nampa, Idaho. On January 25, 1996, the application was declared incomplete. A modified application addressing the incompleteness issues was received on February 23, 1996. The application was declared complete on March 25, 1996. Additional information was forwarded to DEQ on March 25, 1996, April 4, 1996, April 16, 1996, May 13, 1996, May 15, 1996, and September 17, 1996.

The proposed operating permit was initially scheduled for a public comment period beginning on July 4, 1996. The proposed permit public comment period was postponed on July 2, 1996, because of a confidentiality issue concerning the operating permit application. The applicant declared portions of the original application package, submitted on December 29, 1996, to be confidential business information. When the modified application, addressing incompleteness issues, was submitted on February 23, 1996, the application failed to mark the same information confidential. The confidentiality issue was resolved on September 18, 1996. The information labeled confidential in the original application package was found to be confidential business information pursuant to and in accordance with Idaho Code 39-111, and IDAPA 16.01.01.126. A new thirty (30) day public comment period has been scheduled for the proposed permit.

On October 25, 1996, a proposed Tier II permit was issued for public comment. The public comment period was from November 13, 1996, through December 13, 1996. No comments were received.

RECOMMENDATIONS

Based on the review of the OP application and all applicable state rules and federal regulations concerning the permitting of air pollution sources, the Bureau staff recommends that Woodgrain Millwork, Inc., in Nampa, be issued a Tier II OP. Staff members also recommend that the facility be notified in writing of the obligation to pay permit application fees for the Tier II OP.

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cc: J. Palmer, Boise Regional Office
OP File Manual
Source File
COF

COPY

October 25, 1996

MEMORANDUM

TO: Martin Bauer, Chief
Air Quality Permitting Bureau
Air & Hazardous Waste

FROM: Camille D. Ajaka, Air Quality Engineer
Air Quality Permitting Bureau
Operating Permits
Tom Anderson, Air Quality Engineer
Technical Services Bureau

THROUGH: Susan J. Richards, Operating Permits Manager
Air Quality Permitting Bureau
Operating Permits

SUBJECT: Technical Analysis for Proposed Tier II Operating Permit #027-00060
Woodgrain Millwork, Incorporated, Nampa, Idaho

PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 16.01.01., Sections 400 through 406 Rules for the Control of Air Pollution in Idaho (Rules) for issuing Operating Permits.

FACILITY DESCRIPTION

Process Description

Woodgrain Millwork, Incorporated, Nampa, Idaho, is a manufacturing site that produces interior and exterior panel doors. Panel doors are produced using wood substrates, water based glue, and solvent based wood treater. Wood cutting, trimming, sanding, and shaping processes generate wood waste particulate matter (PM). Cyclones and/or baghouses are used to control PM emissions. Volatile organic compounds (VOC) are produced from veneer drying, water based glue emulsion, and solvent based wood treater. All VOC emissions from the facility are uncontrolled. The facility has three (3) natural gas fired dryers and twelve (12) natural gas fired space heaters. There are six (6) buildings at the facility. The facility offices are located in Building #6. The process/equipment are located in five (5) main buildings which include the following operations:

1. Building #1: Louver door fabrication line.
2. Building #2: Glaze door fabrication line, wood block conditioning and veneer drying.
3. Building #3: Colonial door fabrication line and the stile molder line.
4. Building #4: Bifold door line and shipping and receiving operations.
5. Building #5: Stile line, veneer drying, and maintenance operations.

All process/equipment buildings include gluing operations, reclaim operations, limited chemical storage, and space heating.

Control Description

Seven (7) cyclones of different sizes and shapes.

Two (2) baghouses which discharge into Building #3.

Several target boxes.

PROJECT DESCRIPTION

This project is for a Tier II Operating Permit (OP) for the following existing point and fugitive emission sources. The location of the plant is as follows:

Latitude: 43°36'16"
Longitude: 116°35'34"

Point Sources

- (1) Cyclone #1 Stack: Emissions from Building #1 - Louver Doors.

The stack data are the following:

Stack Exit Height (ft): 30.0
Stack Exit Diameter (ft): 5.0
Stack Exit Flow Rate (ACFM): 16,240
Stack Exit Temperature (°F): Ambient

- (2) Cyclone #2 Stack: Emissions from Building #2 - Glaze Line.

The stack data are the following:

Stack Exit Height (ft): 30.0
Stack Exit Diameter (ft): 5.0
Stack Exit Flow Rate (ACFM): 11,950
Stack Exit Temperature (°F): Ambient

- (3) Cyclone #3 Stack: Emissions from Building #4 - Bifold Door Assembly.

The stack data are the following:

Stack Exit Height (ft): 30.0
Stack Exit Diameter (ft): 5.0
Stack Exit Flow Rate (ACFM): 16,240
Stack Exit Temperature (°F): Ambient

- (4) Cyclone #4 Stack: Emissions from Building #3 - Colonial Doors.

The stack data are the following:

Stack Exit Height (ft): 30.0
Stack Exit Diameter (ft): 5.0
Stack Exit Flow Rate (ACFM): 48,250
Stack Exit Temperature (°F): Ambient

- (5) Cyclone #5 Stack: Emissions from Building #5 - Hog (Chipping Device).

The stack data are the following:

Stack Exit Height (ft): 30.0
Stack Exit Diameter (ft): 5.0
Stack Exit Flow Rate (ACFM): 18,500
Stack Exit Temperature (°F): Ambient

- (6) Cyclone #6 Stack: Emissions from Byproduct Loadout Station.

The stack data are the following:

Stack Exit Height (ft): 30.0
Stack Exit Diameter (ft): 5.0
Stack Exit Flow Rate (ACFM): 2,500
Stack Exit Temperature (°F): Ambient

- (7) Cyclone #7 Stack: Emissions from Building #5 - Raw Goods Inventory Warehouse.

The stack data are the following:

Stack Exit Height (ft):	30.0
Stack Exit Diameter (ft):	5.0
Stack Exit Flow Rate (ACFM):	8,700
Stack Exit Temperature (°F):	Ambient

- (8) Baghouse #1 Stack: Emissions from Building #3 (Primary) and Buildings #1, #2, #4, and #5 (Secondary).

The stack data are the following:

Stack Exit Height (ft):	30.0
Stack Exit Diameter (ft):	5.0
Stack Exit Flow Rate (ACFM):	25,133
Stack Exit Temperature (°F):	Ambient

- (9) Baghouse #2 Stack: Emissions from Building #3 (Primary) and Buildings #1, #2, #4, and #5 (Secondary).

The stack data are the following:

Stack Exit Height (ft):	30.0
Stack Exit Diameter (ft):	5.0
Stack Exit Flow Rate (ACFM):	33,929
Stack Exit Temperature (°F):	Ambient

- (10) Natural Gas Fuel Burning Equipment (three (3) dryers and twelve (12) space heaters).

- (11) Veneer drying operation.

- (12) Wood treating, gluing, and synthetic patching operations.

Fugitive Sources

- (1) Haul Roads,
- (2) Loadout Operations, and
- (3) Target Boxes.

A more detailed process description can be found in the OP application materials dated February 23, 1996.

SUMMARY OF EVENTS

On December 29, 1995, DEQ received a Tier II OP application from Woodgrain Millwork, Nampa, Idaho. On January 25, 1996, the application was declared incomplete. A modified application addressing the incompleteness of DEQ's letter was received on February 23, 1996. The application was declared complete on March 25, 1996. Additional information was forwarded to DEQ on March 25, 1996, April 4, 1996, April 16, 1996, May 13, 1996, May 15, 1996, and September 17, 1996.

The proposed operating permit was initially scheduled for a public comment period beginning on July 4, 1996. The proposed permit public comment period was postponed due on July 2, 1996, because of a confidentiality issue concerning the operating permit application. The applicant declared portions of the original application package submitted on December 29, 1996, to be confidential business information. When the modified application, addressing incompleteness issues, was submitted on February 23, 1996, the application failed to mark the same information confidential. The confidentiality information issue was resolved on September 18, 1996. The information labeled confidential in the original application package was found to be confidential business information pursuant to and in accordance with Idaho Code 39-111, and IDAPA 16.01.01.126. A new thirty (30) day public comment period has been scheduled for the proposed permit.

DISCUSSION

1. Emission Estimates

Emission estimates were provided by Woodgrain Millwork. The calculations were resubmitted by the applicant as per DEQ's request. DEQ also estimated the emissions from all the sources of the facility (attached spreadsheet). The hourly emissions calculations were based on the maximum production rate of each equipment/process, and not the maximum rated capacity of that equipment/process. The maximum production rate of any equipment/process is limited to the production rates of the preceding and/or the following equipment/process. The annual emissions calculations were based on varied operating hours or material consumption as presented in the spreadsheet.

Emissions from equipments/processes were estimated using emissions factors furnished by AP-42, 5th edition. Emissions factors from AP-42, 4th edition were used when such emissions factors were not available in AP-42, 5th edition.

The major emissions from the facility are PM. The total allowable emissions are presented below:

PM	92.26 tons per year
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2. Modeling

No modeling for impact analysis for the various emissions from the facility's point sources was performed.

3. Area Classification

Woodgrain Millwork, Inc., Nampa, Canyon County, Idaho, is located in AQCR 64. The area is classified as attainment or unclassifiable for all federal and state criteria air pollutants (i.e., PM, PM-10, CO, NO_x, O₃, VOCs, and SO_x).

4. Facility Classification

The facility is not a designated facility as defined in IDAPA 16.01.01.006.25. The facility is classified as an A2 source because the actual emissions of any criteria pollutant is less than 100 tons per year.

5. Regulatory Review

This OP is subject to the following permitting requirements:

a.	<u>IDAPA 16.01.01.401</u>	Tier II Operating Permit
b.	<u>IDAPA 16.01.01.403</u>	Permit Requirements for Tier II Sources
c.	<u>IDAPA 16.01.01.404.01(c)</u>	Opportunity for Public Comment
d.	<u>IDAPA 16.01.01.404.04</u>	Authority to Revise or Renew Operating Permits
e.	<u>IDAPA 16.01.01.406</u>	Obligation to Comply
f.	<u>IDAPA 16.01.01.470</u>	Permit Application Fees for Tier II Permits
g.	<u>IDAPA 16.01.01.625</u>	Visible Emission Limitation
h.	<u>IDAPA 16.01.01.650</u>	General Rules for the Control of Fugitive Dust

VOC emissions are generated from materials used at the facility which contain Hazardous Air Pollutants (HAPs). HAP emissions from these materials are not significant (less than 1 ton per year). Therefore, the Woodgrain Millwork, Nampa, operations are not subject to Section 585 or 586 of the Rules.

FEES

Fees apply to this facility in accordance with IDAPA 16.01.01.470. The facility is subject to permit application fees for Tier II OP of five hundred dollars (\$500.00). IDAPA 16.01.01.470 became effective on March 7, 1995.

Woodgrain Nampa - TECH MEMO
October 25, 1996
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RECOMMENDATIONS

Based on the review of the Tier II OP application and applicable state rules and federal regulations concerning the permitting of air pollution sources, the Bureau staff recommends that Woodgrain Millwork, Nampa, Idaho, be issued a Tier II OP for the sources that are described in the facility's permit application. An opportunity for public comment on the air quality aspects of the proposed permit shall be provided as required by IDAPA 16.01.01.404.01. Staff members also recommend that the facility be notified of the Tier II OP fee requirement in writing. This fee will be applicable upon issuance of the permit.

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Attachment

cc: A. Ray
J. Palmer, Boise Regional Office
Source File
COF

ATTACHMENT A

Woodgrain Millwork
1201 W. Karcher Rd.
P.O. Box 9489, Nampa

Contact: Jim Jaderholm
Tel. #: (208)452-3801 ext. 625
Permit #: 027-00060

TIER II APPLICATION

PM Emissions

Source	Flow Rate acfm	Max. Rate pph	Act. Rate pph	E. Factor g/acft	Reference 4th ed.	Op. Time hr/yr	PM Rate pph	PM Rate tpy	PM-10 pph	PM-10 tpy	Control Equip.	Efficiency %	Location	Material Handled & Source Description
Cyclone 1	18240	83	78	0.03	T 10.4-1	5000	4.178	10.440	4.178	10.440		94.969	Bldg 1	Saw dust. Louver door fabrication line
Cyclone 2	11950	48	41	0.03	T 10.4-1	4000	3.073	8.146	3.073	8.146		93.320	Bldg 2	Saw dust. Glaze door fab., wood block cond.
Cyclone 3	16240	67	61	0.03	T 10.4-1	5000	4.178	10.440	4.178	10.440		93.787	Bldg 3	Saw dust. Colonial door fabrication
Cyclone 4	48250	287	281	0.03	T 10.4-1	5000	12.407	31.018	12.407	31.018		95.877	Bldg 3	Saw dust. Colonial door fabrication
Cyclone 5	18500	99	90	0.03	T 10.4-1	7000	4.757	16.650	4.757	16.650		95.195	Bldg 5	Saw dust. Stile door fabrication
Cyclone 6	2500	15	14	0.03	T 10.4-1	7000	0.843	2.250	0.843	2.250		95.714	Yard	Chip bin.
Cyclone 7	8700	84	77	0.03	T 10.4-1	500	2.237	0.559	2.237	0.559		97.337	Yard	Chip bin, not operable at this time
		581					31.469	77.503	31.469	77.503				
Application														
Baghouse #1	25133	180	184	0.02	Ap. pp 124	2500	4.309	5.386	4.309	5.386	BH #1		Bldg 3	Sander dust. Vents into the plant
Baghouse #2	33029	243	221	0.02	Ap. pp 124	2500	5.816	7.271	5.816	7.271	BH #2		Bldg 3	Sander dust. Vents into the plant
							10.125	12.656	10.125	12.656				

Source	Flow Rate acfm	Max. Rate pph	Act. Rate pph	E. Factor lb/ton	Reference 4th ed.	Op. Time hr/yr	E. Rate pph	E. Rate tpy	PM-10 pph	PM-10 tpy	Control Equip.	Location	Material Handled & Source Description
Loadout (2 Stations)		1200	1000	2	T 10.4-2	8760	1.200	5.256	1.200	5.256	none	Yard	Chip bin, saw dust and shavings
Target Boxes (many)		6	6	1	T 10.4-2	8760	0.003	0.013	0.003	0.013	none	All over	Wood dust
							1.203	5.269	1.203	5.269			

Operating Time 8760 hr/yr

VOC Emissions

Source	Max. Rate 10 ³ ft ³ /hr	Act. Rate 10 ³ ft ³ /hr	Act. Rate 10 ³ ft ³ /yr	E. Factor lb/10 ³ ft ³	Reference 4th ed.	Max. Em. pph	Max. Em. tpy	Act. Em. tpy	PM-10 pph	PM-10 tpy	Control Equip.	Location	Material Handled & Source Description
Veneer Drying Condensable	0.06	0.04	333	8	T 10.3-2	0.480	2.102	1.332	0.480	2.102	None	Bldg 2&5	
Veneer Drying Volatile	0.06	0.04	333	3	T 10.3-2	0.180	0.788	0.500	---	---	None	Bldg 2&5	

Factor requested 4/4/96 0.6

Source	Max. Rate gal/hr	Act. Rate gal/hr	Act. Rate gal/yr	Density lb/gal	% volatile MSDS	Max. Em. pph	Max. Em. tpy	Act. Em. tpy	Location	Material Handled & Source Description
Wood Treat Process "solvent based"	0.76	0.68	6000						Yard	
Kopcoal	0.15	0.14	1200	7	95	1.005	4.404	3.990		
Mineral Spirits	0.60	0.55	4800	6.5	100	3.931	17.219	15.600		

Factor requested 3/25/96 1.32418

Source	Max. Rate gal/hr	Act. Rate gal/hr	Act. Rate gal/yr	Density lb/gal	% volatile MSDS	Max. Em. pph	Max. Em. tpy	Act. Em. tpy	Location	Material Handled & Source Description
Emulsion Gluing Op. "water based"	13.24	11.44	100000						Facility Wide	
Water based glue	10.81	9.16	80089.52	8.2680	7	4.653	20.381	17.570		
Similar W. b. glue	0.54	0.47	4083.79	8.2687	7	0.237	1.039	0.890		
W. Based catalyst	2.10	1.81	15826.89	8.2679	7	0.920	4.027	3.472		
Syn path B operation "water based"	0.08	0.07	600	8.3	7	0.046	0.204	0.174	Bldg #5	
						10.973	48.062	42.202		

Emissions from Fuel Burning Equipment

Emissions from Fuel burning Equipment		Emission Factors (lb/10 ³ ft ³)							Reference
Source	Capacity MMBtu/hr	N.G. Heat Btu/hr	PM	PM-10	SO ₂	NO _x	CO	VOC	Ap-42
Facility wide	0.3 - 10	913	12	12	0.6	100	21	5.28	T 1.4-1...

Source	Capacity MMBtu/hr	Hourly emission rate (lb/hr)					Annual emission rate (tons/yr)				
		PM	PM-10	SO ₂	NO _x	CO	PM	PM-10	SO ₂	NO _x	VOC
Veneer conditioning	1	0.013	0.013	0.001	0.110	0.023	0.058	0.058	0.003	0.480	0.025
Continuous veneer dryer	1	0.013	0.013	0.001	0.110	0.023	0.058	0.058	0.003	0.480	0.025
Conditioning veneer dryer	1	0.013	0.013	0.001	0.110	0.023	0.058	0.058	0.003	0.480	0.025
Total		0.039	0.039	0.002	0.329	0.069	0.173	0.173	0.009	1.440	0.075
Space heaters	2	0.026	0.026	0.001	0.219	0.046	0.115	0.115	0.006	0.959	0.051
Total		0.066	0.066	0.003	0.548	0.115	0.288	0.288	0.014	2.399	0.127

TOTAL EMISSIONS		
pollutant	pph	tpy
PM	42.074	92.261
VOC	11.002	48.189
SO ₂	0.003	0.014
NO _x	0.548	2.399
CO	0.115	0.504